

Date: Friday, 12/9/2005 11:45:55 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: WEARPAD
Job Number	: 25186		
Estimate Number	: 11349		
P.O. Number	: N/A	Part Number	: D33395
This Issue	: 12/9/2005 S.O. No. : N/A	Drawing Number	: D3339 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 12/9/2005 Type : PURCHASED PARTS	Drawing Revision	: B
Previous Run	: N/A	Material	: N/A
Written By	: See comment below	Due Date	: 12/30/2005
Checked & Approved By	: See comment below	Qty:	20 Um: Each
Comment	: Est Rev:A New Issue 05-11-10 EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	PG	PURCHASING
-----	----	------------



Comment: Issue P/O: 00000267

Est 12/12

E-mail or Ship DXF file to vendor
 Laser cut flat pattern as per Dwg
 Possible supplier: Ind. Laser
 Material release note is required.

2.0	D33395F	WEARPAD-FLAT
-----	---------	--------------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)
 WEARPAD-FLAT

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
 Receive & Inspect For Transit Damage
 Ensure material certification is attached

DL 05/12/30 20

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

06-01-03 22

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE

1-Deburr if necceray

2-Form as per Dwg D3339 using DT8326 and DT8261

SB 06/01/04 22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: ☒ Date: 06/01/16
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 12/9/2005 11:45:55 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPAD

Job Number: 25186

Part Number: D33395

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld Hard coat 7560 per Dwg D3339, use DT8210 & DT8810 Layout Jig

A/R

7560 Hardcoat

Batch:

M19174

CPL 06-01-06

(22)

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD

06-01-10

22

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

W1

06 01 12

22

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

C2 06/01/13

(22)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 419

C2 06/01/13

(22)

12.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

QD

06/01/16

(22)

Job Completion



W 06-01-13

22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

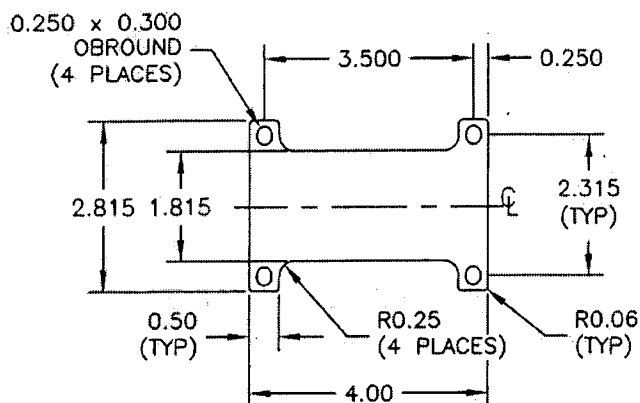
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

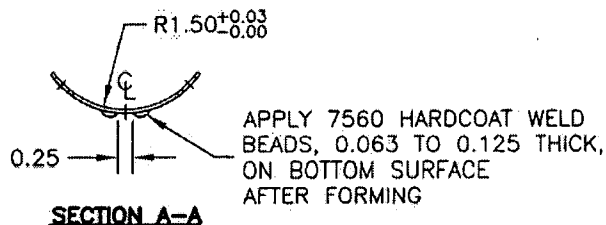


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05-11-27

DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3339	REV. B SHEET 1 OF 3
DATE 05.11.22		TITLE REPLACEMENT WEARPAD	SCALE 1:3
A	05.06.06	NEW ISSUE	
B	05.11.22	CORRECTED HOLE SPACING D3339-7F	

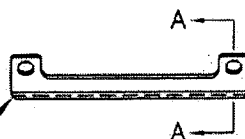


D3339-1F FLAT PATTERN



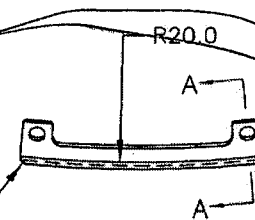
SECTION A-A

APPLY 7560
HARDCOAT WELD BEADS
PER DT3339-3T1
AFTER FORMING
(SEE SECTION A-A)



D3339-3 CENTER WEARPAD
(MADE FROM D3339-1F)

APPLY 7560
HARDCOAT WELD BEADS
PER DT3339-5T1
AFTER FORMING
(SEE SECTION A-A)



D3339-5 FORWARD WEARPAD
(MADE FROM D3339-1F)

D3339-1F/-3/-5 WEARPAD

NOTES:



- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX

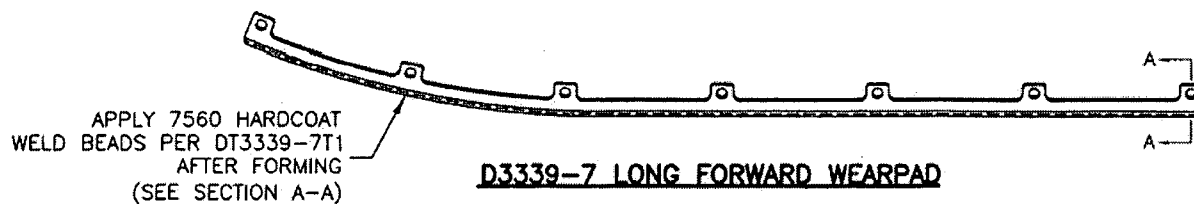
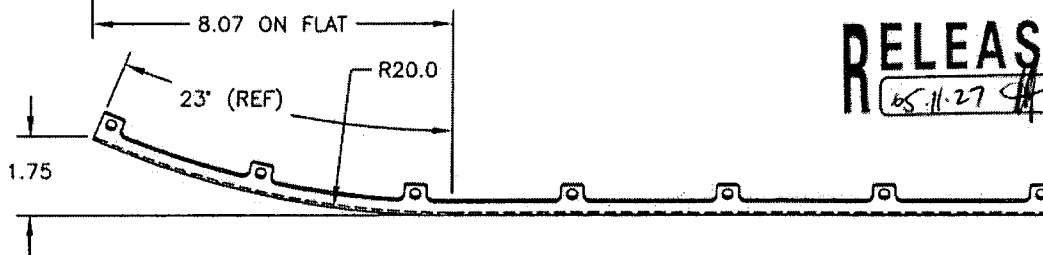
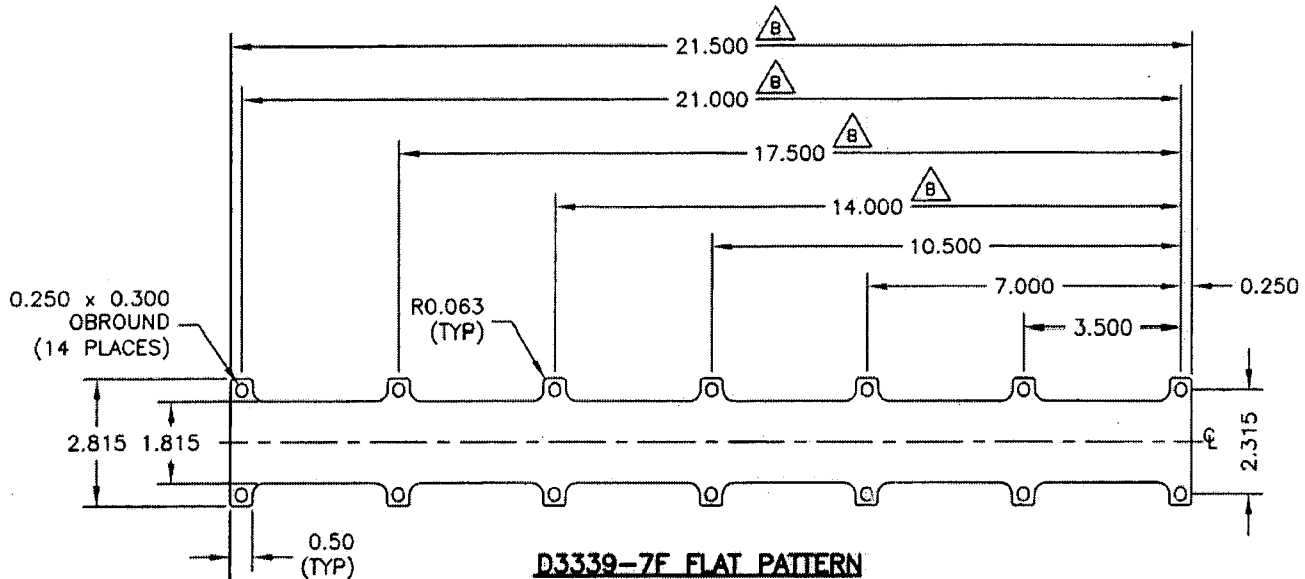
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WORK ORDER
no. 25186

DART

DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3339	REV. B SHEET 2 OF 3
DATE 05.11.22		TITLE REPLACEMENT WEARPAD	SCALE 1:4

**NOTES:**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX

RELEASED
65.11.27

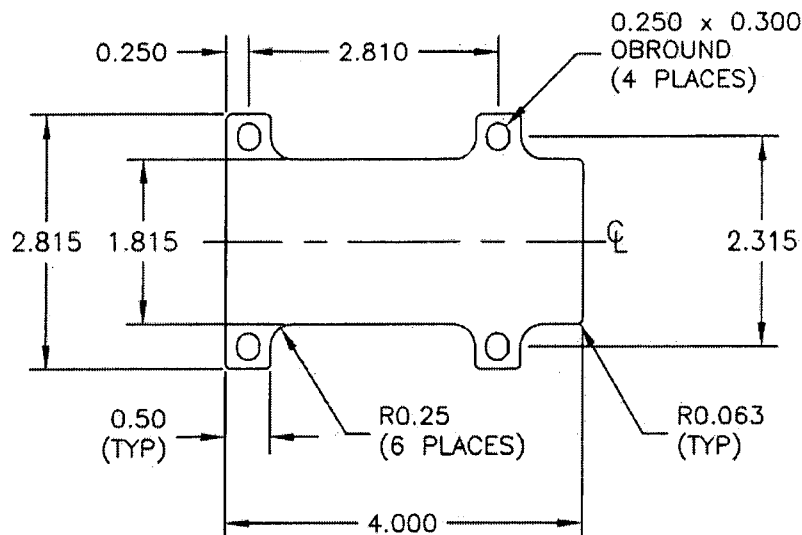
11/27/22
WORK ORDER
NO. 25186

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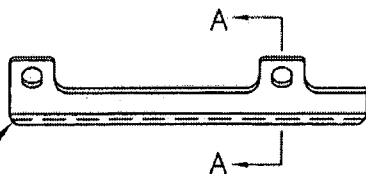
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DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3339	REV. B SHEET 3 OF 3
DATE 05.11.22		TITLE REPLACEMENT WEARPAD	SCALE 1:2

**D3339-9F FLAT PATTERN**

APPLY 7560
HARDCOAT WELD BEADS
PER DT3339-9T1
AFTER FORMING
(SEE SECTION A-A)

**D3339-9 AFT WEARPAD****NOTES:**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX

RELEASED
05.11.27**WORK ORDER**
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INSPECTION CERTIFICATE

MATERIAL TEST/INSPECTION CERTIFICATES

9022975

YIEH MAU CORP.
YIEH MAU CORP.

INVOICE NO.:
COMMODITY: FORMASS
PRIME COLD ROLLED STAINLESS STEEL SHEET AISI 304 NO.4 (2C)
FINISH, WITH 100 MIC.FILM ON MAIN SIDE, WITH BACK-PASS,
SLITTED EDGE, AISI 304, 2B FINISH, WITH PAPER INTERLEAVED,
SLITTED EDGE.
SPECIFICATION: AISI 304
CUSTOMER: INTEGRIS METALS LTD

工廠: 嘉華基港竹脚廣安路345號
345, SHUN AN RD. UJ CHUHSIANG
KAOHSIUNG TAIWAN R.O.C.
TEL: (07) 8721115 FAX: (07) 8720005
CERTIFICATE NO: 90111182
DATE OF ISSUE: 1/10/2004

SPECIFICATION :		CUSTOMER :		INTEGRIS METALS LTD		Physical Properties Tensile Test GL-50mm					Chemical Composition (%)							
(ITEM NO) SIZE	NO.	Weight (N.W.)		Heat No.	ID NO.	Y.S. (N/mm ²)	T.S. (N/mm ²)	E.L. (%)	HRB	HV	C x100	SI x100	Mn x100	P x100	S x1000	NE x100	Cr x100	N x100
		KGS	LBS															
AISI 304 2B (7425-4228)	1	1,465	3,230	YU231320	3AS44453B-21	258	685	56	81	156	4.8	51	119	24	2	804	1821	2.7
24GA/48"X120"	1	1,464	3,228	YU231320	3AS44453B-22	258	685	56	81	156	4.8	51	119	24	2	804	1821	2.7
24GA/48"X120" (7425-5860)	1	1,464	3,228	YU230510	38637608B-51	280	673	53	82	162	5.4	50	126	26	3	815	1819	2.4
22GA/48"X96" (7425-5851)	1	1,375	3,031	YU230510	38637608B-52	280	673	53	82	162	5.4	50	126	26	3	815	1819	2.4
22GA/48"X120" (7425-5859)	1	1,445	3,186	YU134975	3AS43434A-1	312	666	51	82	161	4.1	49	112	24	2	808	1821	2.8
18GA/48"X96" (7425-2619)	1	1,497	3,300	YU231066	3AS42732-4	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7
18GA/48"X96" (7425-2619)	1	1,453	3,203	YU231066	3AS42732-5	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7
18GA/48"X120"	1	1,455	3,208	YU231066	3AS42732-6	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7
16GA/48"X120" (7425-5166)	1	1,423	3,137	YU231143	3AS42866A-6	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
16GA/48"X120"	1	1,424	3,139	YU231143	3AS42866A-7	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
16GA/48"X120" (7425-7949)	1	1,420	3,131	YU231143	3AS42866B-1	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
14GA/48"X96"	1	1,441	3,177	YU231075	3AS42917A-1	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4
14GA/48"X96"	1	1,441	3,177	YU231075	3AS42917A-2	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4
14GA/48"X120" (7425-8053)	1	1,420	3,131	YU231075	3AS42917A-3	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4
14GA/48"X120"	1	1,420	3,131	YU231075	3AS42917A-4	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4
14GA/60"X96" (7425-8244)	1	1,446	3,188	YU136202	3AS45623A-211	301	641	53	81	157	5.1	51	114	30	9	806	1822	3
14GA/60"X96" (7425-8277)	1	1,405	3,097	YU135202	3AS45623A-213	301	641	53	81	157	5.1	51	114	30	9	806	1822	3
14GA/60"X120"	1	1,540	3,395	YU136202	3AS45623A-214	301	641	53	81	157	5.1	51	114	30	9	806	1822	3
18		25,998	57,317															

Remarks: NO MERCURY CONTAMINATION
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS
BEEN MADE IN ACCORDANCE WITH THE RULES OF THE MILL CERTIFICATE.

PRODUCT IN ACCORDANCE WITH ASTM A240, A480,
A362E, ASME SA240, Q35766D.

YIEH MAU CORP.
Lin Kuan Hsin
Manager of Quality Assurance Section

20 ga 304 455

(0.037)

po 267 196



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8999 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waiuku
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5379/23650

CUSTOMER Wilkinson		P50505-DI002		SPECIFICATION ASTM A1008 CS Type A		CERTIFICATE No TC116858																														
CUSTOMER O/N 90-21N-742				PRODUCT CRA WIDE COIL		PAGE 1 of 1																														
MILL O/N 486968				DIMENSIONS 0.033" x 48" x Coil		DATE 19 August 2005																														
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT														MECHANICAL TESTS (TEST SPECIFICATION - ASTM A370)																				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH												
		x100														x10000							x100													
R9-466080-00	845423	6	TR	21	11	16	17	20	16	2	3	1	3					180°	Good				50	2700												
R9-466081-00	845423	6	TR	21	11	16	17	20	16	2	3	1	3					Good				50	2700													
R9-466082-00	845253	6	1	21	10	12	28	30	15	2	3	1	3					Good				47	2651													
R9-466083-00	845253	6	1	21	10	12	28	30	15	2	3	1	3					Good				47	2651													

YIELD	GAUGE LENGTH (G.L.)			PLASTIC STRAIN RATIO (r)			IMPACT TEST			CARBON EQUIVALENT VALUE (CE)		
(A)=0.2% PROOF STRESS	(A)=200mm	(C)=80mm	(E)=2"	(A)=r0	(C)=r45	(B)=r90	(A)=10mm x 10mm	(C)=5mm x 5mm	(A)=C+Mn/6	(C)=C+MnV6+Si/24		
(B)=LOWER YIELD STRESS	(B)=50mm	(D)=5.65 x So	(F)=8"	(B)=r90	(D)=(r0+r90+2r45)/4		(B)=7.5mm x 10mm	(D)=2.5mm x 10mm	(B)=C+Mn/8+(Cr+V+Mo)/5+(Cu+Ni)/15	(D)=		

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

Atish Misra
QC METALLURGIST

20 gms

PO# 267, 146,



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8998 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waiuku
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: S210/22495

CUSTOMER	Wilkinson	P50323 DI001	SPECIFICATION	ASTMA1008 CS Type A	CERTIFICATE No	TC112397
CUSTOMER O/N	90-21N-686		PRODUCT	CRA WIDE COIL	PAGE	1 of 1
MILL O/N	480737		DIMENSIONS	0.055" x 48" x C6H	DATE	09 June 2005

PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT																MECHANICAL TESTS (TEST SPECIFICATION - ASTM A370)						
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH
		x100				x1000										x10000	x100	180°			G.L.=	HRB	()	(feet)
R9-459713-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1585
R9-459714-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1457
R9-459715-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1375
R9-459716-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1473
R9-459717-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1631
R9-459718-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1093
R9-459719-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1562
R9-459720-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1535
R9-460380-00	641761	4	TR	20	13	17	12	18	25	5	8	1	1					Good				50		1581
R9-460381-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1562
R9-460382-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1503
R9-461458-00	642309	2	TR	18	10	20	11	17	19	1	6	1	1					Good				48		1785

YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	(C)=5mm x 5mm	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS	(A)=200mm (C)=80mm (E)=2"	(A)=r0 (C)=r45	(A)=10mm x 10mm	(A)=10mm x 10mm	(A)=C+Mn/8
(B)=LOWER YIELD STRESS	(B)=50mm (D)=5.65? So (F)=8"	(B)=r90 (D)=(r0+r90+2r45)/4	(B)=7.5mm x 10mm	(D)=2.5mm x 10mm	(B)=C+Mn/8+(Cr+V+Mo)/5+(Cu+Ni)/15
				(E)=5mm x 10mm	(C)=C+Mn/8+Si/24
					(D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

Atish Misra
QC METALLURGIST

16 ga ms

POA 146, 267, 245,